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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/656,471 | 09/05/2003 | James Alfred Dunnam | DUQU-01 | 8690 |

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| EXAMINER | |
|---|---|
| PARSLEY, DAVID J | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3643 | |

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/656,471 | DUNNAM ET AL. | |
| | Examiner | Art Unit | |
| | David J. Parsley | 3643 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *19 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## Detailed Action

### *Appeal*

1. In view of the appeal brief filed on 9-19-06, PROSECUTION IS HEREBY REOPENED.

A new grounds of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

PETER M. POON
SUPERVISORY PATENT EXAMINER

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 8, 10-13, 16, 20, 22-26 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,553,481 to Ricci.

Referring to claim 1, Ricci discloses a cylindrical ballistic tracer platform for holding and carrying an integrated inseparable tracer element having a bottom – see at 40-72, the tracer platform designed for use with a shotgun shell – at 10, having a bore – see figure 2, a shot holder – at 32,34, and propellant – at 28, the tracer platform – at 40,46,48,50,52,54,56, to be positioned within the shotgun shell to fill the bore between the shot holder and the propellant – see figure 2, the tracer platform having a closed nose – see at 40,46,48, to be positioned proximate to the shot holder – see figure 2, and a bottom to be positioned proximate to the propellant – see at 56 in figure 2, the tracer element – at 66-74, being disposed away from the shot holder – see figure 2, the tracer element filling a coaxial cavity having a lower end at the bottom of the tracer platform – see figure 2, the bottom of the tracer platform and the bottom of the tracer element being shaped to leave a generally concave cavity – see at 40-72 in figure 2, which acts as a gas seal upon ignition of the propellant – see figure 2.

Referring to claim 13, Ricci discloses a shotgun shell with a tracer for making shot projectiles visible to a shooter comprising, a hollow shotgun shell – at 10, having a bore – see figure 2, a lower end and an upper end – see figure 2, a base – at 12, with primer – at 18-22, for ignition located inside the lower end of the shotgun shell – at 10 – see figure 2, a propellant – at 28, positioned proximate to the primer – see figure 2, a shot holder – at 32,34, holding shot pellets – at 44, located inside the upper end of the shotgun shell – at 10 – see figure 2, and a cylindrical ballistic tracer platform for holding and carrying an integrated inseparable tracer

element having a bottom – see at 40-72, the tracer platform designed for use with the shotgun shell – at 10, the tracer platform – at 40,46,48,50,52,54,56, to be positioned within the shotgun shell to fill the bore between the shot holder and the propellant – see figure 2, the tracer platform having a closed nose – see at 40,46,48, to be positioned proximate to the shot holder – see figure 2, and a bottom to be positioned proximate to the propellant – see at 56 in figure 2, the tracer element – at 66-74, being disposed away from the shot holder – see figure 2, the tracer element filling a coaxial cavity having a lower end at the bottom of the tracer platform – see figure 2, the bottom of the tracer platform and the bottom of the tracer element being shaped to leave a generally concave cavity – see at 40-72 in figure 2, which acts as a gas seal upon ignition of the propellant – see figure 2.

Referring to claims 4 and 16, Ricci discloses the tracer element is chemiluminescent – see column 3 lines 15-58.

Referring to claims 8 and 20, Ricci discloses the nose of the tracer platform has a shape of flat, conical or spherical – see at 40,46,48,52 in figure 2.

Referring to claims 10 and 22, Ricci discloses the tracer platform has an outer surface with grooves formed therein – see figure 2.

Referring to claims 11 and 23, Ricci discloses the tracer platform has an outer surface with symmetrically positioned fins attached thereto – see at 56 and 64 in figure 2.

Referring to claims 12 and 24, Ricci discloses the tracer platform has an outer surface with orifices formed therein – see the open spaces proximate 46-56 in figure 2.

Referring to claims 25-26, Ricci discloses the tracer element is made inseparable from the ballistic tracer platform by means of interference fitting – see at 76 in figure 2.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci as applied to claims 1 and 13 above, and further in view of U.S. Patent No. 1,457,337 to Barrows.

Referring to claims 2 and 14, Ricci does not disclose the tracer element comprises a cylindrical housing containing pyrotechnic material susceptible to ignition upon burning of the propellant. Barrows does disclose the tracer element comprises a cylindrical housing – at 9, containing pyrotechnic material – at 11-12, susceptible to ignition upon burning of the propellant – at 5 – see for example figures 1-4. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Ricci and add the pyrotechnic material tracer element of Barrows, so as to allow for the device to accurately display the path of the shot in flight.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci as modified by Barrows as applied to claim 2 above, and further in view of U.S. Patent No. 6,694,887 to Diller.

Referring to claims 2 and 13, Ricci as modified by Barrows does not disclose the housing of the tracer element contains a fire-suppressing agent. Diller does disclose the housing of the tracer element – at 26, contains a fire-suppressing agent – see for example column 8 lines 25-32.

Therefore it would have been obvious to one of ordinary skill in the art to take the device of Ricci as modified by Barrows and add the housing containing a fire-suppressing agent of Diller, so as to allow for the tracer element to not be consumed during the burning of the propellant.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci as applied to claim 13 above, and further in view of U.S. Patent No. 6,694,887 to Diller.

Referring to claims 2 and 13, Ricci does not disclose the housing of the tracer element contains a fire-suppressing agent. Diller does disclose the housing of the tracer element – at 26, contains a fire-suppressing agent – see for example column 8 lines 25-32. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Ricci and add the housing containing a fire-suppressing agent of Diller, so as to allow for the tracer element to not be consumed during the burning of the propellant.

Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci as applied to claims 1 or 13 above, and further in view of U.S. Patent No. 3,262,390 to Cowles et al. Ricci does not disclose the tracer platform has a ballistic coefficient equivalent to a shot pellet's ballistic coefficient. Cowles et al. does disclose the tracer platform – at 11-12, has a ballistic coefficient equivalent to a shot pellet's – at 15, ballistic platform – see for example column 3 lines 49-63. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Ricci and add the tracer platform and shot having the same ballistic coefficient of Cowles et al., so as to allow for the tracer platform to accurately follow the path of the shot pellets upon ignition of the propellant in the shell.

Claims 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci as modified by Cowles et al. as applied to claims 5 or 17 above, and further in view of Diller. Ricci

as modified by Cowles et al. does not disclose the tracer platform is made from one or more materials selected from the group of aluminum, brass, lead, neoprene, nylon, polyethylene, polyurethane, rubber, steel, Teflon, and titanium. Diller does disclose the tracer platform – at 26, is made of plastics, metals and rubber – see for example column 8 lines 25-33. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Ricci as modified by Cowles et al. and add the tracer platform made of plastics, metals or rubber of Diller, so as to allow for the tracer platform to be durable.

Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci as applied to claims 1 or 13 above, and further in view of U.S. Patent No. 4,841,866 to Miesner. Ricci does not disclose the tracer platform has a diameter in the range of 0.2 inches to 1.25 inches. Miesner does disclose the tracer platform – at 16, has a diameter in the range of 0.2 inches and 1.25 inches – see for example column 4 lines 31-40. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Ricci and add the tracer platform having a diameter in the range of 0.2 inches and 1.25 inches of Miesner, so as to allow for the tracer platform to ballistically match the shot pellets.

Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci as applied to claims 1 or 13 above, and further in view of FR Patent No. 2598213. Ricci does not disclose the tracer platform has formed therein symmetrical cavities for holding weights for adjustment of the tracer platform's weight and flight characteristics. The French patent does disclose the tracer platform – at 6, has formed therein symmetrical cavities – see at either end of 6 in figure 5, for holding weights – at 5, for adjustment of the tracer platform's weight and flight characteristics – see for example figure 5. Therefore it would have been obvious to one of

ordinary skill in the art to take the device of Ricci and add the multiple weights of the French patent, so as to allow for the weight of the tracer platform to correspond to the weight of the shot pellets.

***Response to Arguments***

4. Applicant's arguments with respect to claims 1-4, 6-8, 10-16, 18-20 and 22-26 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claims 5 and 17, the Cowles et al. reference US 3262390 is not used to show the shape of the tracer element or the location of the tracer platform with relation to the shot and therefore these arguments are deemed moot.

Regarding claims 9 and 21, the French patent FR 2598213 discloses cavities on the top and bottom of item 6 as seen in figure 5, for holding weights – at 5 as seen in figure 5. The items – at 5 of the French patent are solid and thus have weight which effects the flight characteristics of the shell.

***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Parsley whose telephone number is (571) 272-6890. The examiner can normally be reached on Monday-Friday from 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (571) 272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Parsley
Patent Examiner
Art Unit 3643

PETER M. POON
SUPERVISORY PATENT EXAMINER